INTRODUCTORY REMARKS

Applicant amends independent claim 1 to explicitly state the inherent feature that traversing a trie is performed using different portions of the first address. Applicant similarly amends independent claims 12, 17, 27. Applicant also amends claim 28 to explicitly state the inherent feature that the trie's leaves are accessed using different portion of an address, and further amends claim 28 to add the feature, previously described in now canceled claim 29, that the address used to access the trie's leaves is a storage area address corresponding to the respective cache address identified by the trie's leaves. Applicant also amends claim 6 to indicate the proper dependency of the claim, and amends claim 8 to correct an antecedent basis issue.

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REMARKS

This Response is filed in reply to the Office Action dated April 6, 2004. In this Response, Applicant amends claims 1, 6, 8, 12, 17, 27 and 28, cancels without prejudice claim 29, adds claim 32-43, and traverses the Examiner's rejection of claims 1-30. Amendments to the claims are not an acquiescence to any of the rejections. Further, silence with regard to any of the Examiner's rejections is not an acquiescence to such rejections. Specifically, silence with regard to Examiner's rejection of a dependent claim, when such claim depends from an independent claim that Applicant considers allowable for reasons provided herein, is not an acquiescence to such rejection of the dependent claim(s), but rather a recognition by Applicant that such previously lodged rejection is moot based on Applicant's remarks and/or amendments relative to the independent claim (that Applicant considers allowable) from which the dependent claim(s) depends. Upon entry of the amendments and new claims, claims 1-28, and 30-43 are pending in the present application.

The issues of the Office Action are presented below with reference to the Office Action.

With regard to the Office Action, paragraphs 1-2: Applicant notes and acknowledges Examiner's comments provided therein.

With regard to paragraphs 3-5, entitled "Claim Rejections - 35 U.S.C. §102": Examiner rejected claims 1-30 under 35 U.S.C. §102(e) as being anticipated by Van Hook et al. (U.S. Patent No. 6,549,210).

As Examiner knows, and as provided in MPEP 2131, "a claim is anticipated *only if each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference" [emphasis added] (*Verdegaal Bros.* v. *Union Oil Co. of California*, 2 USPQ2d 1051, 1053). Applicant respectfully submits that Van Hook does not disclose all the features of Applicant's independent claims 1, 12, 17, 27, and 28.

Applicant's independent claim 1 discloses a method of data storage address translation, the method comprising receiving a first address in a first address space, *traversing a trie using different portions of the first address*, and determining a second address based on the traversal.

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In contrast, Van Hook describes a system and method for generating cache indexes that reduce the likelihood that adjacent addresses will map to the same cache regions. As seen in FIG. 9, the Van Hook system includes a DRAM memory 900 containing sequences of data words (or more particularly, texture data), cache memory 901, a tag table 902, a cache manager 903, and a texel processing component 904 (see also col. 15, lines 1-4). Van Hook discloses (Col. 15, line 60 to Col. 16, line 12) that a texture image stored on DRAM 900 may be traversed to access a particular tile, and when a cache request is received from the texel processing component in the form of an address, the cache manager accesses a tag in the tag table to determine if the data requested by the texel processing component is held in cache (Col. 17, lines 1-22). To locate a particular tile in DRAM 900, the DRAM address location where that particular tile is held is computed according to a formula that uses a base address BASE (the base address of the texture image in DRAM 900) and the tile coordinates. Accordingly, in contrast to Applicant's independent claim 1, traversal of the texture image in DRAM 900 is *not* based on *using different portions of the first address* (or any address) to access any particular tile stored in DRAM 900.

Furthermore, the tag table is indexed/accessed using a single portion of the address received from the texel processing component (e.g., the middle portion of the address) (Col. 18, lines 1-30). The remainder of the address corresponding to the accessed tag is retrieved from a storage location associated with the tag, and the full address associated with the accessed tag is compared to the address sent by the texel processing component (Col. 18, lines 5-18). Retrieval of the remainder of the access does not, however, require any further use of the address sent by the texel processing component. Van Hook thus describes a single tag table access based on a single portion of the address sent by the requesting module (e.g., the texel processing component). No other portion of the address sent by the requesting module is used to perform additional accessing or traversing of the tag table, and/or any other storage memory, and accordingly, Van Hook does not teach *traversing a trie* [or any other data structure]*using different portions of the first address.*

Since Van Hook does not teach Applicant's claimed *traversing a trie using different portions of the first address*, Applicant traverses the Examiner's 35 U.S.C. §102(e) rejection of independent claim 1, and considers independent claim 1 to be allowable. The Examiner's

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rejections of dependent claims 2-11 are thus also traversed, and claims 2-11 are allowable as depending from an allowable base claim.

Applicant's independent claims 12 and 17 are companion system and computer program product claims, respectively, to Applicant's allowable independent method claim 1, and disclose features similar to those disclosed in allowable independent claim 1. Applicant's independent claim 27 is a method of data storage address translation, and independent claim 28 includes a memory for storing data, both of which also disclose features similar to those disclosed in Applicant's allowable independent claim 1. For the reasons stated previously with respect to allowable independent claim 1, Applicant thus traverses the Examiner's 35 U.S.C. 102(e) rejection of independent claims 12, 17, 27, and 28, and considers independent claims 12, 17, 27 and 28 to be allowable. Since claims 13-16, 18-26, and 30 depend from one of allowable independent claims 12, 17, 27, or 28, Applicant traverses the Examiner's rejections of such dependent claims, and considers claims 13-16, 18-26, and 30 to also be allowable as depending from an allowable base claim.

With regard to the Office Action, paragraph 6, entitled "Allowable Subject Matter": Applicant acknowledges with appreciation the Examiner's allowance of claim 31.
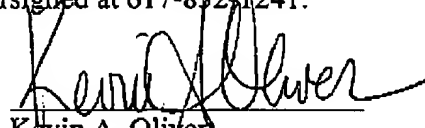
New Claims 32-43

New independent claims 36 and 39 are companion system and computer program product claims, respectively, to Applicant's allowed independent method claim 31. New independent claims 36 and 39 are therefore also allowable as disclosing similar features to those disclosed in Applicant's allowed independent claim 31.

New claims 32-35, 37-38, and 40-43 depend from allowable independent claims 31, 36, and 39, respectively, and hence, are also allowable.

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CONCLUSION

In view of the foregoing remarks, Applicant submits that the response herein is fully responsive to the subject Office Action, and that the pending claims are allowable over the cited prior art. Accordingly, Applicant submits that claims 1-28 and 30-43 are now in condition for allowance. Withdrawal of the pending rejections, and favorable reconsideration are respectfully solicited. If there are any remaining issues or the Examiner believes that a telephone conversation with Applicants' attorney would be helpful in expediting the prosecution of this application, the Examiner is invited to call the undersigned at 617-832-1241.

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